

## PARTIAL DUPLEX FREQUENCY DOMAIN MODULATOR SYSTEM AND METHOD

### Abstract of the Disclosure

In a multi-carrier transmission scheme (frequency domain multiplexed - FDM), a single high rate data stream is split into multiple lower rate data streams each transmitted over a different carrier (e.g., a tone or bin). The data rate possible from a multiple-carrier transmission scheme is theoretically equivalent to the data rate possible from a single-carrier (including baseband) scheme with the same composite bandwidth. The scheme allows for a communications system that can selectively send each data signal (e.g., audio data, video data, raw data, etc.) partitioned out into full and half duplex sections (e.g., tones). The scheme can have a reduced complexity and cost and use less bandwidth. This is done by being able to selectively split a data signal into both full and half duplex tones.

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